



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 12-09 Technical Advisory

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TO: All Design, Operations, and District Personnel, and Consultants

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SUBJECT: Bridge Railings

REVISES: *Indiana Design Manual Figures 404-4B and 404-4C*

EFFECTIVE: September 12, 2012, Letting

A. Standard Documents

Standard information regarding bridge railing and transitions has been revised. The INDOT *Standard Drawings* in series 706, unless identified otherwise, have been revised as listed below.

Proposed designations listed first, alphabetically

Proposed Designation	Current Designation	Proposed Meaning	Device Designation
BRPP	[same]	Bridge Railing Pedestrian Parapet	PF-1, PF-2, PS-1, PS-2
BRSF	BCBR	Bridge Railing Shape F	FC, FT
BRTF	[same]	Bridge Railing Truck-ht. Flush, 2 rails	TF-2
BRTR	TBRC, -E, -F	Bridge Railing Thrie Retrofit	TR
BRTX	[same]	Bridge Railing TeXas	TX
CBRT	[same]	Concrete Bridge Railing Transition	[same]
731-MSRW	731-BRRW	Moment Slab at Retaining Wall	[same]
TTFC	TTBC	Transition Thrie shape F Common ht.	TFC, was TBC
TTFT	TTBT	Transition Thrie shape F Truck ht.	TFT, was TBT

TTPP	TTBP	Transition Thrie Pedestrian Parapet	TPF-1, TPF-2, TPS-1, TPS-2
TTTF	TPBT	Transition Thrie Truck ht. Flush, 2 rails	TTF-2, was TPBT
TTTX	[same]	Transition Thrie TeXas	TTX
TWFC	TWBC	Transition W-bm. shape F Common ht.	WFC, was WBC
[delete]	BRTM	[Bridge Railing CF-1]	[delete]

Device Designation Meaning

FC	concrete shape F, Common height
FT	concrete shape F, Truck height
PF-1	concrete Parapet, Flush with deck, 1 steel rail
PF-2	concrete Parapet, Flush with deck, 2 steel rails
PS-1	concrete Parapet, atop Sidewalk, 1 steel rail
PS-2	concrete Parapet, atop Sidewalk, 2 steel rails
TF-2	concrete Truck height, Flush with deck, 2 steel rails
TR	steel Thrie-section, Retrofit
TX	concrete, first used in TeXas

Bridge-railing type CF-1 and its transition have been deleted as standard devices.

All related revised and new *Standard Drawings* appear on the Department website, at <http://www.in.gov/dot/div/contracts/standards/drawings/sep12/e/sep700.htm>.

Recurring Special Provision 706-B-197, attached herewith, should be called for beginning with the September 12, 2012, letting, if the project includes INDOT *Standard Specifications* Section 706 pay items.

Indiana Design Manual Figures 404-4B and 404-4C have been revised online to show these changes. They are attached herewith.

B. Compatibility of Bridge Positive-Protection Devices

Alphabetical order by bridge-railing designation

Bridge Railing	Bridge-Railing Transition	RCBA Extension	Guardrail Transition
FC	TFC, was TBC	16'-5"	TGB
FC	WFC, was WBC	18'-0"	WGB
FT	TFT, was TBT	20'-6"	TGB
PF-1	TPF-1	16'-5"	TGB
PF-2	TPF-2	16'-5"	TGB
PS-1	TPS-1	16'-5"	TGB
PS-2	TPS-2	16'-5"	TGB

TF-2	TTF-2, was TPBT	20'-6"	TGB
TR	[none]	[none]	TGR
TX	TTX	20'-6"	TGB

The pay-item code numbers for bridge-railing transitions now designated as TFC, TFT, TTF-2, and WFC have not been changed. Calling for the code number for inclusion in an estimate of quantities or cost estimate for a project on Sept. 12, 2012, letting or later, will provide the new pay-item designation shown above.

C. Bridge-Railing Pay Items

Alphabetical order by device type. X = required

Device Type	Railing, Concrete, _____ type	Pay Unit *	Railing, Steel, _____ type	Pay Unit	Reinforcing Bars	Pay Unit
FC	X	CYS			X	LBS
FT	X	CYS			X	LBS
PF-1	X	CYS	X	LFT	X	LBS
PF-2	X	CYS	X	LFT	X	LBS
PS-1	X	CYS	X	LFT	X	LBS
PS-2	X	CYS	X	LFT	X	LBS
TF-2	X	CYS	X	LFT	X	LBS
TR			X	LFT		
TS-1			X	LFT		
TX	X	CYS			X	LBS

* Pay unit of LFT instead of CYS should be used only for a bridge rehabilitation, with the permission of the Office of Bridge Rehabilitation.

D. Bridge-Railing-Transition Pay Items

Alphabetical order by bridge-railing device type. X = required

Bridge-Railing Device Type	Transition Device Type	Concrete Bridge Railing Transition, —— type	Reinforcing Bars
FC	TFC	X	X
FC	WFC	X	X
FT	TFT	X	X
PF-1	TPF-1	X	X
PF-2	TPF-2	X	X
PS-1	TPS-1	X	X
PS-2	TPS-2	X	X
TF-2	TTF-2	X	X
TR	[none]		
TS-1	[none]		
TX	TTX	X	X

The pay unit for all transitions is EACH. The pay unit for all reinforcing bars is LBS.

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Attachments